21BDS0340

Abhinav Dinesh Srivatsa

Programming for Data Science Lab

Digital Assignment – V

**Code**

install.packages("shiny")

install.packages("ggplot2")

install.packages("magrittr")

library(shiny)

library(ggplot2)

library(magrittr)

ui <- fluidPage(

titlePanel("21BDS0340"),

sidebarLayout(

sidebarPanel(

sliderInput("num\_points", "Number of Points:", min = 10, max = 100, value = 50),

actionButton("generate", "Generate Plot")

),

mainPanel(

plotOutput("scatterPlot")

)

)

)

server <- function(input, output) {

generate\_data <- function(num\_points) {

data.frame(

x = rnorm(num\_points),

y = rnorm(num\_points)

)

}

output$scatterPlot <- renderPlot({

generate\_data(input$num\_points) %>%

ggplot(aes(x = x, y = y)) +

geom\_point() +

labs(title = "Random Scatter Plot", x = "X axis", y = "Y axis")

})

observeEvent(input$generate, {

output$scatterPlot <- renderPlot({

generate\_data(input$num\_points) %>%

ggplot(aes(x = x, y = y)) +

geom\_point() +

labs(title = "Random Scatter Plot", x = "X axis", y = "Y axis")

})

})

}

shinyApp(ui = ui, server = server)

**Output**

> install.packages("shiny")

trying URL 'https://cran.rstudio.com/bin/macosx/big-sur-arm64/contrib/4.2/shiny\_1.8.1.1.tgz'

Content type 'application/x-gzip' length 4764151 bytes (4.5 MB)

==================================================

downloaded 4.5 MB

The downloaded binary packages are in

/var/folders/*2f*/*9fz2wbqj7vlcygt681kl2k0m0000gn*/T//RtmpQWcJD8/downloaded\_packages

> install.packages("ggplot2")

trying URL 'https://cran.rstudio.com/bin/macosx/big-sur-arm64/contrib/4.2/ggplot2\_3.5.0.tgz'

Content type 'application/x-gzip' length 4830392 bytes (4.6 MB)

==================================================

downloaded 4.6 MB

The downloaded binary packages are in

/var/folders/*2f*/*9fz2wbqj7vlcygt681kl2k0m0000gn*/T//RtmpQWcJD8/downloaded\_packages

> install.packages("magrittr")

trying URL 'https://cran.rstudio.com/bin/macosx/big-sur-arm64/contrib/4.2/magrittr\_2.0.3.tgz'

Content type 'application/x-gzip' length 231132 bytes (225 KB)

==================================================

downloaded 225 KB

The downloaded binary packages are in

/var/folders/*2f*/*9fz2wbqj7vlcygt681kl2k0m0000gn*/T//RtmpQWcJD8/downloaded\_packages

> library(shiny)

> library(ggplot2)

> library(magrittr)

> ui <- fluidPage(

+ titlePanel("21BDS0340"),

+ sidebarLayout(

+ sidebarPanel(

+ sliderInput("num\_points", "Number of Points:", min = 10, max = 100, value = 50),

+ actionButton("generate", "Generate Plot")

+ ),

+ mainPanel(

+ plotOutput("scatterPlot")

+ )

+ )

+ )

> server <- function(input, output) {

+ generate\_data <- function(num\_points) {

+ data.frame(

+ x = rnorm(num\_points),

+ y = rnorm(num\_points)

+ )

+ }

+

+ output$scatterPlot <- renderPlot({

+ generate\_data(input$num\_points) %>%

+ ggplot(aes(x = x, y = y)) +

+ geom\_point() +

+ labs(title = "Random Scatter Plot", x = "X axis", y = "Y axis")

+ })

+

+ observeEvent(input$generate, {

+ output$scatterPlot <- renderPlot({

+ generate\_data(input$num\_points) %>%

+ ggplot(aes(x = x, y = y)) +

+ geom\_point() +

+ labs(title = "Random Scatter Plot", x = "X axis", y = "Y axis")

+ })

+ })

+ }

> shinyApp(ui = ui, server = server)

Listening on http://127.0.0.1:7622

**Dashboard Images**

A screenshot of a graph

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated